

CONCEPTS FOR ASSURING FOOD QUALITY

Citrus Processing
Short Course
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What is “Quality”?

What is “Quality”?

Quality is the degree to which a product (or service) meets the expectations of your customer.

What are “Expectations”?

Expectations are:

The FEATURES and BENEFITS by which your customer makes their assessment of quality.

Kano Quality Model



Knowing Expectations Isn't Enough

- Expectations must be translated into requirements

- Example:

Expectation

-low calorie

Requirement

-98% fat free
-50 calories
per serving

Requirements Define Your Product

- **Consumer**

formula, process, packaging

- **Food Safety Requirements**

time/temp criteria, pH

- **Regulatory**

label weight, nutritional declaration

- **Corporate**

package coding

Quality is.....

- EASY to **talk** about, **BUT**
- Takes **EFFORT** to **DEFINE**
- **ORGANIZATION** to **ACHIEVE!!!**

Ingredients to Achieving Quality

- Great specifications
- Your Quality Systems manual
- Balance of QC and QA
- Education and Training
- Passion for YOUR product!

GREAT Specifications

- Translating **expectations** into **specifications** is hard, but very important work!

GREAT Specifications

- Design phase
 - Define target consumer and their expectations
 - Translate expectations into measurable attributes
 - Link attributes to product and process parameters

GREAT Specifications

■ Development Phase

- Define targets and ranges for all key parameters
- Set standards for “good” and “bad” product
- Define sampling plans, SPC methods and corrective action guidelines

GREAT Specifications

- Start Up Phase
 - Confirm product meets the design
 - Assess process capability vs. desired targets and ranges
 - Recycle, if process isn't capable
 - **DON'T SET SPECIFICATIONS THAT CAN'T BE MET!**

Your Quality Systems Manual

- Documented quality systems are a “must have” in today’s business environment
 - Complex products and processes
 - Many employees with quality responsibilities
 - Sophisticated customers
 - Retailers, restaurant chains, food service cos.
 - Government Regulations

Your Quality Systems Manual

- Elements to consider:
 - Corporate Policies
 - Food safety, quality
 - Management's roles/responsibilities
 - GMP's
 - Food Safety programs
 - QC and QA programs
 - Audits and Inspections
 - Continuous Improvement

Your Quality Systems Manual

■ Make it USEFUL

- Write with your organization in mind.
 - Guidance for R&D, Purchasing, Operations
 - Clear roles/responsibilities defined
- Be clear and concise
 - Use bullets and/or checklists
 - Define “shoulds” and “shalls”
 - Document key procedures

Balance of QC and QA

■ QUALITY CONTROL

- On line checks

- Weights

viscosities

- pH

color

- Done in “real time” to adjust process

- Using SPC methods to keep process on TARGET and avoid over/under control

- With clear instructions for:

- Process adjustment

- Product actions to be taken

Balance of QC and QA

In Process Control vs Inspection:

- Control of key parameters during formulation, processing and packaging, will result in finished product conforming to spec.
- In process control is more effective and efficient than sampling and inspection after production.

Balance of QC and QA

■ QUALITY ASSURANCE

- Verification of QC activities
- Off line tests to verify product is as intended
 - Composition
 - Sensory evaluation
- Records review
 - Records provide a product “pedigree”
 - Incomplete or inaccurate records compromise that pedigree
 - Verify that records are complete and acceptable

Balance of QC and QA

- POSITIVE RELEASE:

- Verification that all the HACCP checks, QC checks and QA evaluations have been completed and the results are acceptable PRIOR to the release of finished goods for shipment.

Balance of QC and QA

- Rationale for positive release;
 - Your inventories are LOW
 - Shipments are frequent
 - May be shipping direct to customers
 - Customer inventories are LOW
- Your shipment today may be in customer stores this week!
- Withdrawals and RECALLS are costly!

Education and Training

- R&D and QA do NOT make your product...

Operations does!!!

Education and Training

Operations management needs;

- Clear understanding of their quality **roles/responsibilities**
- Education on **principles** of QA
- Training in **methods**

Education and Training

- Operations personnel need:
 - General training in:
 - GMP's
 - QC
 - HACCP
 - Job specific training in:
 - SPC
 - Allergens
 - CCP's
 - Sanitation
- On job verification of specialized skills
 - Metal detector checks
 - SPC charts and line adjustment methods

Education and Training

- Education and training is:
 - An investment in PREVENTION
 - A source of competitive advantage
 - NOT a cost to be minimized!

A Passion for YOUR Product

- How do YOU answer the question:

“How’s quality?”

A Passion for YOUR Product!

- A product can be safe and meet spec, BUT still not satisfy your customer
 - Does it have the intended flavor/taste?
 - Does it perform as intended?
 - Is the product appearance right?
 - Is the packaging well assembled and free of defects?

A Passion for YOUR Product

- Evaluate your products regularly at all levels of the organization
 - Benchmark internally versus competition
 - Consumer test versus competition
- Build a sensory program
 - Conduct routine sensory in the plant
 - Support with training and calibration from HQ
- Listen to your consumers
 - Analyze contacts for early warnings, trends

A Passion for YOUR Product

- Publish a Quality scorecard
 - Monthly
 - Internal measures
 - First pass quality
 - Specification compliance
 - Target compliance
 - Holds/rejections and causes
 - Consumer/customer measures
 - Complaints
 - Rejections
 - Annually
 - Market audits
 - Consumer test results
 - Quality Improvement plans and status reports

A Passion for your Product

Remember:

SUCCESS comes to those who know
and satisfy their customer better
than the competition!